

repeatedly that the claims do not have to specifically describe an invention if the claims can be understood from the description found in the specification of the application. See, e.g., Seattle Box Co., Inc. v Industrial Crating and Packaging, Inc., 221 USPQ 568 (Fed. Cir. 1984), *later appeal* 225 USPQ 357 (Fed. Cir. 1985); Shatterproof Glass Corp. v Libbey-Owens Ford Co., 225 USPQ 634 (Fed. Cir. 1985); and Orthokinetics, Inc. v Safety Travel Chairs, Inc., 1 USPQ2d 1081 (Fed. Cir. 1986).

Moreover, the Applicants believe that by including in the claims all of the information that is found in the specification relating to the definition of the term "rapid film fabrication", the claim would become overly verbose and could thereby generate confusion as to the interpretation of the claim.

Claims 1-21 stand rejected under 35 USC §102(b) as anticipated by, or in the alternative under 35 USC §103(a) as obvious over Lee et al. (WO 97/27259). The Examiner's states that it is the burden of the Applicants to show that the product of the product-by-process claims are different from the prior art in some non-obvious manner.

The Applicants contend that the present product does differ from the cited art in a non-obvious way when made according to the process described in the present application. The Applicants describe in the present application, a laminated film comprising at least one adhesive layer obtained by a rapid film fabrication process. The Applicants, as noted on page 2, lines 25-28, have surprisingly found that polyethylene adhesives that include a grafted substantially linear polyethylene have a substantially higher peel strength than polyethylene adhesives that include grafted conventional polyethylenes, when each is made by a rapid film fabrication process as described herein.

Lee et al. does not specifically disclose a rapid film fabrication process as described herein. The Examiner notes that Lee describes a line speed of 4.3-4.6 m/min. This is not

a rapid film fabrication process according to the Applicants' invention, as can be seen from the specification, at page 3, starting at line 11 and continuing to page 4 line 18. The slowest line speed considered "rapid" by the Applicants is 50 m/min.

It is surprising and unexpected that grafted substantially linear polyethylene films obtained by the rapid film fabrication processes of the present invention, have such markedly higher peel strengths than films obtained by identical processes using conventional polyethylene grafted copolymers. The Applicants refer the Examiner to Examples C20 and C21. These examples compare a conventional graft polyethylene obtained by a "low speed" process with a substantially linear polyethylene grafted copolymer obtained by the same process. The peel strength of the conventional graft material is higher than the peel strength of the substantially linear polyethylene graft material (4609 gm/25 mm versus 4143 gm/25 mm).

Compare these results with the results from examples 28 and C19. Example 28 is an example of the present invention, and is a film fabricated by a rapid speed process using a grafted copolymer that includes substantially linear polyethylene. Example C19 is a film fabricated by a rapid fabrication process using a grafted copolymer that includes conventional polyethylene. In these two examples, however the order, or relative degree, of the peel strengths are reversed from those films obtained in C20 and C21. The film of the present invention, which includes the substantially linear polyethylene grafted copolymer, has a peel strength nearly 5 times that of the film obtained from the conventional grafted copolymer (1543 gm/25mm versus 319 g/25mm). In examples C15 and 22, films are obtained at a line speed of 244 m/min. The film of example 22 has a peel strength more than 6-times that of the conventional grafted polyethylene material (1244 gm/25mm v 174 gm/25 mm). (Note - the peel strengths of different sets of examples are not directly comparable because of the differences in the layers' thickness of the layers.) These results are not

obvious from the prior art. Therefore, the Applicants respectfully contend that the films made according to the process of the present invention are not anticipated by Lee. The laminates have a substantially different property than the prior art. Nor is the present invention made obvious by Lee et al. because the properties cannot be predicted from the reference.

Claims 1-21 stand rejected under 35 USC §103(a) as being unpatentable over Hughes in view of McCormack. The Examiner asserts that Hughes discloses graft-modified substantially linear polyethylenes of the type described in the present invention. McCormack teaches that films can be laminated using a line speed of 152 m/min. The Examiner's position is that it would have been obvious to one of ordinary skill in the art to laminate the films of Hughes using a line speed and air gap of McCormack, since this would have the advantage of increased speed as compared with that disclosed in the Hughes.

The Applicants respectfully disagree. The presently claimed invention is not obvious for several reasons. First, the Examiner has challenged the Applicants to demonstrate the uniqueness of the product produced by the process described in the present application from the prior art. The difference in the presently claimed invention from the combination of references is that the Applicants have discovered that the peel strength of a laminate film described herein can be substantially increased relative to a conventional graft material by running the process at a faster rate. This is not an obvious result from a combination of the cited references. Neither Hughes nor McCormack teaches -- or even suggests -- that the peel strength of a laminate would be improved by running the process at a faster line speed, as the Applicants have discovered. While it may be obvious to try to run at a faster pace, it is not obvious how to do so successfully. Many processes would be run at a faster production rate if increased production was simply a matter of increasing the rate at which the process is run. Care must be taken to insure that the

quality of the product obtained will be maintained. A balance between product quality and increased production must be struck. By running at a faster rate, it could be expected that the defect rate could increase due to: reduced interlayer adhesion in the composite structure; reduced impact strength; reduced heat seal strength in a package; an increase in the number of defective packages that are improperly sealed. Film properties can be optimized at slower fabrication rates. Physical defects can be minimized. Great expense and effort can be spent in trying to find the right conditions for running a high speed process. There is no reasonable expectation of success created by the references individually or in combination to suggest the Applicants' results. The courts acknowledge that merely being "obvious to try" is not sufficient basis for a finding of obviousness under the statute. See In re Eli Lilly & Co., 14 USPQ2d 1741 (Fed. Cir. 1990).

The Applicants respectfully contend that the only motivation to combine the two references seems to be the Applicants' disclosure, in which unexpected improved properties are demonstrated in the laminate. The Examiner cites the motivation to increase production speeds however, "A commercial motivation is not a technologic suggestion to combine references." Lamb-Weston, Inc. v. McCain Foods, Ltd., 13 USPQ2d 1856 (Fed. Cir. 1996). Hughes does not suggest making a laminate film using a rapid fabrication process. There is no mention in either of the references that lead a skilled artisan to conclude that the combination would lead to improved peel strength, and therefore no motivation to combine the references. The motivation strictly resides in the Applicants' successful results. Using the Applicants disclosure as a template for combining references is not proper for a determination of obviousness under the statute.

Further, the process described in McCormack is not analogous to the Applicants' process. McCormack teaches a thermal lamination process and not a coextrusion process. The

two processes are very different. In McCormack, a film is cast (there is no mention of the speed of this step). Then the cast film is oriented (again no speed is given for this process step). The oriented film is then thermally laminated at a line speed of 152 m/min. In a thermal lamination process, heated film and a fibrous spunbonded material are contacted and bonded together. In a coextrusion process, molten resin layers are contacted inside of a die. Again, the combined references do not teach the Applicants' claimed invention or place it in the hands of the skilled artisan.

Careful review of the examples in Hughes demonstrates that Hughes teaches away from the Applicants invention. The examples in Hughes as tabulated in column 8, Table 3 show that the substantially linear polyethylene graft materials do not show any advantage over conventional graft materials in bonding to EVOH. In fact, the conventional graft materials show *higher* adhesion to EVOH than the substantially linear grafts of Hughes. To further this point, the Applicants invite the Examiner to look at the results in Hughes' Table 1 as it relates to the information in Table 3. Note that the substantially linear materials incorporate anhydride more efficiently than the conventional materials. Even so, the conventional materials still outperform the substantially linear materials in adhesion to the film. Again, the examples of the present invention referenced above show that the substantially linear graft materials of the present invention significantly outperform the conventional materials in adhesion. These results are unexpected and not obvious from the references.

Claims 1-21 rejected under 35 USC §103(a) as unpatentable over Lee in view of McCormack and/or Obijeski. The Examiner takes the position that it would have been obvious to use the line speeds of McCormack, motivated by the increased production speeds therein, to form the laminate of Lee.


The Applicants respectfully disagree. The Applicants submit that the arguments put forward in the above discussion

with respect to the combination of Hughes and McCormack also apply with respect to this combination of references. (i) The thermal lamination process of McCormack is not analogous to the Applicants' process. (ii) Increasing the line speed would only have been obvious to try, but no reasonable expectation of the successful result obtained by the Applicants could be envisioned from the two disclosures, either alone or in combination. (iii) There is no indication in either Lee or in McCormack that the laminates of the present invention would have improved adhesion, as measured by peel strength as a result of using a rapid film fabrication process.

Obijeski teaches away from the present invention. Obijeski teaches that any or all graft polymers are suitable for use in the high speed process described therein, while the Applicants have discovered that the grafted copolymer must be based upon a substantially linear polyethylene copolymer.

The Applicants believe that the above comments have been fully responsive to the Examiner's comments. The Applicants believe that we have met our burden in demonstrating surprising and unexpected results. The Applicants respectfully request that the rejection of Claims 1-21 be withdrawn, and instead a Notice of Allowance for these claims be issued.

Respectfully submitted,



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